**CODE AND CONNECTIONS IN WOKWI FOR THE ULTRASONIC SENSOR:**

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**HC-SR04 Ultrasonic Sensor Example.**

**Turn the LED on when an object is within 100cm range.**

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**#define ECHO\_PIN 2**

**#define TRIG\_PIN 3**

**void setup() {**

**Serial.begin(115200);**

**pinMode(LED\_BUILTIN, OUTPUT);**

**pinMode(TRIG\_PIN, OUTPUT);**

**pinMode(ECHO\_PIN, INPUT);**

**}**

**float readDistanceCM() {**

**digitalWrite(TRIG\_PIN, LOW);**

**delayMicroseconds(2);**

**digitalWrite(TRIG\_PIN, HIGH);**

**delayMicroseconds(10);**

**digitalWrite(TRIG\_PIN, LOW);**

**int duration = pulseIn(ECHO\_PIN, HIGH);**

**return duration \* 0.034 / 2;**

**}**

**void loop() {**

**float distance = readDistanceCM();**

**bool isNearby = distance < 100;**

**digitalWrite(LED\_BUILTIN, isNearby);**

**Serial.print("Measured distance: ");**

**Serial.println(readDistanceCM());**

**delay(100);**

**}**